

Claims

1        A radio receiving system comprising

5        a receiver for a first spread spectrum radio signal, said receiver including means for receiving and despreading said first spread spectrum signal; and a sequence generator for controlling a code sequence of a frequency-hopped signal for processing a second spread spectrum signal,

10      wherein the receiver for the first spread spectrum signal includes.

15      a programmable rejection filter for the first spread spectrum signal before that signal is despread, and means for controlling said filter in accordance with said code sequence to provide selective attenuation of frequency components which correspond to components in the frequency-hopped signal and are within the bandwidth of the first spread spectrum signal

20      2        A system according to claim 1 wherein the receiver includes a mixer for the conversion of the first spread spectrum signal to an intermediate frequency band and the programmable filter provides rejection of frequency components that have been converted to frequencies within said intermediate frequency band

25      3        A system according to claim 1 wherein the receiver includes means for down-converting the first spread spectrum signal to I and Q signals in a low-frequency band and means for converting said I and Q signals to digital signals and wherein said filter comprises digital filters for the said digital signals

30      4        A system according to claim 1 wherein the system includes a second receiver for the second spread spectrum signal and the sequence generator is coupled to a frequency-hopping synthesiser for said second receiver

5        A system according to claim 1 wherein the system includes a transmitter for the second spread spectrum signal and the sequence generator is coupled to a frequency-hopping synthesiser for said transmitter

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6        A radio receiving system comprising:

10      a receiver for a first spread spectrum radio signal, said receiver including means for receiving and despread said first spread spectrum signal, and a sequence generator for controlling the generation of a frequency-hopped signal for spreading or despread a second spread spectrum signal;

15      wherein the receiver for the first spread spectrum signal includes a programmable rejection filter for the first spread spectrum signal before that signal is despread, said filter being coupled to and controlled by the sequence generator to provide selective attenuation of frequency components which correspond to components in the frequency-hopped signal and are within the bandwidth of the first spread spectrum signal

20      7        A system according to claim 6 wherein the receiver includes a mixer for the conversion of the first spread spectrum signal to an intermediate frequency band and the programmable filter provides rejection of frequency components that have been converted to frequencies within said intermediate frequency band

25      8        A system according to claim 6 wherein the receiver includes means for down-converting the first spread spectrum signal to I and Q signals in a low-frequency band and means for converting said I and Q signals to digital signals and wherein said filter comprises digital filters for the said digital signals

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9        A system according to claim 6 wherein the system includes a receiver for the second spread spectrum signal and the sequence generator is coupled to a frequency-hopping synthesiser for said receiver

5        10      A system according to claim 6 wherein the system includes a transmitter for the second spread spectrum signal and the sequence generator is coupled to a frequency-hopping synthesiser for said transmitter

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